

# Diversity, Equity, and Inclusion within the Department of Geological Sciences at SUNY Geneseo



Presented by: Maria Leonard (mll15@geneseo.edu)

## Background

Why representation for students is important:

- **Stereotype Threat:** The concept that some people are good or not good at something because of one's identity as a member of a group for which a stereotype of ability applies

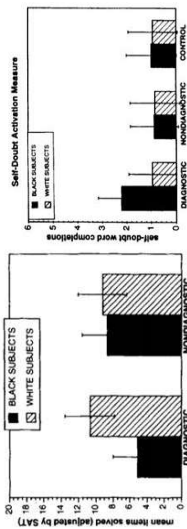


Figure 1: A bar graph showing the mean test scores of a group that has been primed and one that hasn't (Steele & Aronson, 1995)

- **Imposters Syndrome:** the sense of feeling not "good enough" to be a member of a particular community (Huntoon et al., 2015).

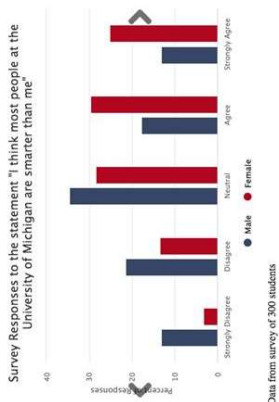


Figure 2: Bar graph showing the mean test scores of a group that has been primed and one that hasn't (Steele & Aronson, 1995)

## Diversity within the Geosciences?

- The geosciences have the lowest diversity of all the STEM fields at all levels of higher education (Huntoon et al., 2015).
- 90% of doctoral degrees are awarded to White people.
  - 1% - 8% of the science represented by BIPOC people and only 22% represented by individuals identified as women
  - First year geology undergraduate populations across various institutions in the U.S. are 50% BIPOC and 55% identified as women.
  - During this summer with the Black Lives Matter movement, geology was publicly and nationally outed as one of the most racist sciences. (Wilson, 2016)

**Acknowledgements:** I would like to thank Dr. Jacalyn Wittmer-Malinowski for all their hard work founding the task force and being the URGE Pod leader, Dr. Dori Farthing for advising me through this project, all the GSCI faculty for their commitment to URGE, and the McNair Department for their support throughout this project.

## Bio-sketches

**Goals of the Project:** Research past and present geoscientist that represent diversity within the field and create bio sketches of them to be made into a display for the geology department.

**Josefa Cuevas** (1920-2010) is known as the first woman geologist in Mexico. She attended the School of Engineering at National Autonomous University of Mexico (UNAM) and received her degree in Geological Engineering in 1945. She was a specialist in paleogeography and the founder of the Department of Paleogeography at UNAM. She also worked as an independent geologist for Petroleos Mexicanos.

- Josefa was the first female to graduate as a geological engineer and the 15th to graduate from UNAM.
- She won the first medal for Merit at UNAM for a geology major.
- While a student, she was working for the Paleontology Department in the Exploration area of PEMEX.
- In 1990 the Mexican Geological Society recognized her for her contribution to the science.






Figure 4: A Bio-sketch of Josefa Cuevas.



Figure 5: A photograph of the display of all of the geologist that have bio sketches made, created by Dr. Dori Farthing.

## DEI Taskforce


"The task force is built with the goal of having all members of the Geneseo GSci community involved with improving the diversity, equity and inclusivity in our classrooms, community, and culture. I created this task force so that it can be a group where student voices and concerns are heard and validated" - Dr. Jacalyn Wittmer-Malinowski



Figure 6: A screenshot of an URGE meeting. The participants are (clockwise from top left) Dr. Jacalyn Wittmer-Malinowski, Maria Nick LaCombe, Dr. Scott Griggs, Jason Mueller, Dr. Dori Farthing is the URGE pod member not featured in this photo.

## Unlearning Racism in the Geosciences (URGE):

- Created by professionals, academics, postdocs, and grad students in the geosciences with three primary goals:
1. Deepen the community's knowledge of the effects of racism on the participation and retention of BIPOC peoples in the geoscience.
  2. Draw on existing literature, expert opinions and personal experiences to develop anti-racist policies and strategies.
  3. Share, discuss and modify anti-racist policies and strategies within our department and STEM community network.



URGE is a community-wide journal-reading and policy-design curriculum to help diversify the Geosciences.

Session	Topic	Deliverable	Inclusivity Tip
1) 1/18 - 1/29/21	Racism and Definitions	Group Norms and Pod Agreements	Finding Your Voice
2) 2/1 - 2/12/21	Racism and Individuals	Policy for Dealing with Complaints	Why Proportions
3) 2/15 - 2/26/21	Racism and History	Statistical Analysis of Program and History	Feeling Your Own Power
4) 3/1 - 3/12/21	Racism and Justice	Recommendations for Hiring Policies	Local Leadership
5) 3/15 - 3/26/21	Racism and Accessibility	Lab and Field Code of Conduct	Letters of Acknowledgment
6) 3/29 - 4/9/2021	Racism and Inclusivity	Assessment Map of Resources to Support People of Color	Recommendations for Awards
7) 4/12 - 4/23/2021	Racism and Self Care	Assessment Map of Resources to Support People of Color	Self Care, Mental Health, & Emails
8) 4/26-5/7/2021	Racism and Advocacy	Policy Booklet with Recommendations	Staying Resilient

Visit our website for more information and FAQs! [urgescience.org](http://urgescience.org)

- We have all of the faculty, staff and a few student volunteers participating as the SUNY Geneseo pod.
- There are 250 pods, and over 3,000 participants.

Figure 7: The curriculum outline of URGE in spring '21 from <http://urgescience.org/>

## Citations

Beard, R. E., & Goodrick, E. H. (2018). No progress on diversity in 40 years. *Nature Geoscience*, 11(5), 292-295. doi:10.1038/s41561-018-0164-4

Chen, S. E., & Muller, N. P. (2014). Diversity, Social Growth Provision, and Performance in the Firm. *Journal of Economics & Management Science*, 23(2), 465-481. doi:10.1111/jems.12001

Huntoon, J. E., Turekian, C., & Jodges, J. (2015). Increasing Diversity in the Geosciences. *Ess*, 96, doi:10.1029/2015eo002897

Steele, S. (2019). Students' faculty reflect on the impostor syndrome at the University. *The Michigan Daily*.

Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology*, 69(5), 797-811. doi:10.1037/0022-3514.69.5.797

Wilson, C. (2016). *State of the geosciences workforce 2016*. Alexandria, VA: American Geosciences Institute.

<http://urgescience.org/>

Josefa Cuevas

- Josefa Cuevas and Ana Maria Aguilar: "Who is Geology?" 31 May 2021 11:00 AM, 2021
- Ana Maria Aguilar: Science and sex, collection: "Who is Geology?" 31 May 2021 11:00 AM, 2021
- Ernesto Lopez-Barrios: "Contribution to the history of geology in Mexico" Bulletin of the Mexican Geological Society